

REMARKS

Claims 1-2, 6-12, 16-21, and 24-25 were previously pending in this patent application. Claims 1-2, 6-12, 16-21, and 24-25 stand rejected. Herein, Claims 1, 10, and 20 have been amended. Accordingly, after this Amendment and Response After Final Action, Claims 1-2, 6-12, 16-21, and 24-25 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks and arguments set forth below is respectfully requested.

35 U.S.C. Section 103(a) Rejections

Claims 1-2, 8-9, and 20-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al., U.S. Patent No. 6,415,138 (hereafter Sirola), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), and in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa). These rejections are respectfully traversed.

Independent Claim 1 recites (as amended):

A user interface for a portable electronic device, said user interface comprising:

a) a **flexible** display panel, said flexible display panel forming a first layer of said user interface; and

b) a **flexible touch sensor** disposed immediately **under a bottom of** said flexible display panel and **is separate from said flexible display panel**, said flexible touch sensor forming a second layer of said user interface, wherein said flexible touch sensor **is operable to register a position where contact is made** with a surface of said user interface, wherein a particular position on said user interface is translated into a particular command controlling said portable electronic device. (emphasis added)

It is respectfully asserted that the combination of Sirola, Katsura, and Nishikawa does not teach, motivate, or suggest the present invention as recited

in Independent Claim 1. In particular, Independent Claim 1 recites the limitations, "a ***flexible*** display panel," (emphasis added), and, "a ***flexible touch sensor*** disposed immediately ***under a bottom of*** said flexible display panel and ***is separate from said flexible display panel...is operable to register a position where contact is made,***" (emphasis added). At page 2 of the Final Office Action, it is admitted that Sirola does not show a flexible touch sensor disposed immediately under the flexible display panel, as in the invention of Independent Claim 1. Although the activation means (5) of Sirola is cited as corresponding to the flexible touch sensor of Independent Claim 1, Sirola discloses a touch sensitive display (3) and an activation means (5) arranged to transmit a pressing of the activation means (5), e.g., by a finger, to the activation area (3b-3d) on the touch sensitive display (3). [Sirola; Figures 1-2; Col. 4, lines 34-67]. That is, the activation means (5) transmits a pressing of the activation means (5) to the touch sensitive display (3) instead of being a flexible touch sensor operable to register a position where contact is made, as in the invention of Independent Claim 1. Since the display (3) is touch sensitive, this suggests that a touch sensor is integrated into the display (3) instead of being separate from the display (3), as in the invention of Independent Claim 1. Moreover, Sirola fails to disclose the touch sensitive display (3) as being flexible, as in the invention of Independent Claim 1.

Further, item 4 of Figure 1 and Col. 5, lines 43-50 of Katsura are cited as teaching the flexible touch sensor disposed immediately under the flexible display panel. However, Katsura states that the flexible liquid crystal display panel (4) of Figure 1 has, as an integral part of it, a touch-sensitive input operating part through which data can be entered by touching. [Katsura; Figure 1; Col. 5, lines 11-16]. Further, Katsura emphasizes that since the touch-

sensitive input operating part is an integral part of the flexible liquid crystal display panel (4), a switching member for data entry need not be provided outside the display screen; hence, the surface areas of the main body (1) and the cover (2) can be utilized to the utmost and the display screen can be made large accordingly. [Katsura; Col. 5, lines 43-49]. Since the touch-sensitive input operating part is an integral part of the flexible liquid crystal display panel (4), it is not possible for the touch-sensitive input operating part to be disposed immediately under a bottom of the flexible liquid crystal display panel (4), as in the invention of Independent Claim 1. Thus, Katsura fails to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claim 1.

Furthermore, at page 3 of the Final Office Action, it is admitted that Sirola and Katsura do not show the flexible touch sensor is separate from the flexible display panel, as in the invention of Independent Claim 1. However, Figure 1 and several portions of Nishikawa are cited as teaching the flexible touch sensor is separate from the flexible display panel.

As discussed above, Sirola and Katsura fail to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel. Continuing, in Figure 3, Nishikawa shows an aluminum reflection film (17) and a polarizing plate (16) between the display (12) and the switch matrix (1) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 1. Now referring to Figure 5, Nishikawa shows a reflective plate (49) and a reinforcing plate (50) between the display (41) and the switch matrix (42) having the membrane switches, which are

cited as corresponding to the flexible touch sensor of Independent Claim 1. In Figures 10, 11, 12, 13, 14, 15, and 16, Nishikawa shows at least a reflective plate (49) between the display and the switch matrix (42) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 1. Also, in Figures 22 and 23, Nishikawa shows a sheet (80) with projections (81) between the display (41) and the switch matrix (42) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 1. [Nishikawa; Col. 16, lines 1-44]. In sum, Nishikawa fails to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel, as in the invention of Independent Claim 1.

Thus, the combination of Sirola, Katsura, and Nishikawa does not teach, motivate, or suggest all the limitations of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is patentable over the combination of Sirola, Katsura, and Nishikawa and is in condition for allowance.

Dependent Claims 2 and 8-9 are dependent on allowable Independent Claim 1, which is allowable over the combination of Sirola, Katsura, and Nishikawa. Hence, it is respectfully submitted that Dependent Claims 2 and 8-9 are patentable over the combination of Sirola, Katsura, and Nishikawa for the reasons discussed above.

With respect to Independent Claim 20, it is respectfully submitted that Independent Claim 20 recites similar limitations as in Independent Claim 1. In particular, the Independent Claim 20 recites the limitation "receiving input via *a*

flexible touch sensor disposed immediately under a bottom of said flexible display panel and is separate from said flexible display panel," (emphasis added). As discussed above, the combination of Sirola, Katsura, and Nishikawa fails to teach, suggest, or motivate the cited limitations. Therefore, Independent Claim 20 is allowable over the combination of Sirola, Katsura, and Nishikawa for reasons discussed in connection with Independent Claim 1.

Dependent Claim 21 is dependent on allowable Independent Claim 20, which is allowable over the combination of Sirola, Katsura, and Nishikawa. Hence, it is respectfully submitted that Dependent Claim 21 is patentable over the combination of Sirola, Katsura, and Nishikawa for the reasons discussed above.

Claims 10 and 18-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., U.S. Patent No. 5,634,080 (hereafter Kikinis), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), and in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa). These rejections are respectfully traversed.

Independent Claim 10 recites (as amended):

A portable computer system comprising:

- a) a bus;
- b) a memory device coupled with said bus;
- c) a processor coupled with said bus;
- d) a flexible display panel coupled with said bus, said flexible display panel forming a first layer of a user interface; and
- e) a ***flexible touch sensor disposed immediately under a bottom of said flexible display panel and is separate from said flexible display panel,*** said flexible touch sensor forming a second layer of said user interface. (emphasis added)

It is respectfully asserted that the combination of Kikinis, Katsura, and Nishikawa does not teach, motivate, or suggest the present invention as recited in Independent Claim 10. In particular, Independent Claim 10 recites the limitation, "a ***flexible touch sensor disposed immediately under a bottom of said flexible display panel and is separate from said flexible display panel,***" (emphasis added) instead of the language "touch sensor coupled with flexible display panel" found on page 6 of the Final Office Action. In contrast, Kikinis shows a touch-sensitive interface (27) that is disposed above the LCD display (25) instead of showing a flexible touch sensor disposed immediately under a bottom of the flexible display panel, as in the invention of Independent Claim 10. [Kikinis; Figure 2; Col. 4, lines 43-64]. Further, Katsura states that the flexible liquid crystal display panel (4) of Figure 1 has, as an integral part of it, a touch-sensitive input operating part through which data can be entered by touching. [Katsura; Figure 1; Col. 5, lines 11-16]. Also, Katsura emphasizes that since the touch-sensitive input operating part is an integral part of the flexible liquid crystal display panel (4), a switching member for data entry need not be provided outside the display screen; hence, the surface areas of the main body (1) and the cover (2) can be utilized to the utmost and the display screen can be made large accordingly. [Katsura; Col. 5, lines 43-49]. Since the touch-sensitive input operating part is an integral part of the flexible liquid crystal display panel (4), it is not possible for the touch-sensitive input operating part to be disposed immediately under a bottom of the flexible liquid crystal display panel (4), as in the invention of Independent Claim 10. Thus, Katsura also fails to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claim 10.

Furthermore, at page 7 of the Final Office Action, it is admitted that Kikinis and Katsura do not show the flexible touch sensor is separate from the flexible display panel, as in the invention of Independent Claim 10. However, Figure 1 and several portions of Nishikawa are cited as teaching the flexible touch sensor is separate from the flexible display panel.

As discussed above, Kikinis and Katsura fail to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel. Continuing, in Figure 3, Nishikawa shows an aluminum reflection film (17) and a polarizing plate (16) between the display (12) and the switch matrix (1) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 10. Now referring to Figure 5, Nishikawa shows a reflective plate (49) and a reinforcing plate (50) between the display (41) and the switch matrix (42) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 10. In Figures 10, 11, 12, 13, 14, 15, and 16, Nishikawa shows at least a reflective plate (49) between the display and the switch matrix (42) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 10. Also, in Figures 22 and 23, Nishikawa shows a sheet (80) with projections (81) between the display (41) and the switch matrix (42) having the membrane switches, which are cited as corresponding to the flexible touch sensor of Independent Claim 10. [Nishikawa; Col. 16, lines 1-44]. In sum, Nishikawa fails to teach, motivate, or suggest a flexible touch sensor disposed immediately under a bottom of the flexible display panel, as in the invention of Independent Claim 10.

Thus, the combination of Kikinis, Katsura, and Nishikawa does not teach, motivate, or suggest all the limitations of Independent Claim 10. Therefore, it is respectfully submitted that Independent Claim 10 is patentable over the combination of Kikinis, Katsura, and Nishikawa and is in condition for allowance.

Dependent Claims 18-19 are dependent on allowable Independent Claim 10, which is allowable over the combination of Kikinis, Katsura, and Nishikawa. Hence, it is respectfully submitted that Dependent Claims 18-19 are patentable over the combination of Kikinis, Katsura, and Nishikawa for the reasons discussed above.

Claims 11-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., U.S. Patent No. 5,634,080 (hereafter Kikinis), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa), and further in view of Sirola et al., U.S. Patent No. 6,415,138 (hereafter Sirola). These rejections are respectfully traversed.

Dependent Claims 11-12 are dependent on allowable Independent Claim 10, which are allowable over the combination of Kikinis, Katsura, and Nishikawa. Moreover, Sirola does not disclose a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claim 10. Hence, it is respectfully submitted that Independent Claims 10 is patentable over the combination of Kikinis, Katsura, Nishikawa, and Sirola for the reasons discussed above. Since Dependent Claims 11-12 depend from Independent Claims 10, it

is respectfully submitted that Dependent Claims 11-12 are patentable over the combination of Kikinis, Katsura, Nishikawa, and Sirola for the reasons discussed above.

Claims 7 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al., U.S. Patent No. 6,415,138 (hereafter Sirola), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa), and in view of Lui et al., U.S. Patent No. 6,210,771 (hereafter Lui). These rejections are respectfully traversed.

Dependent Claim 7 and Dependent Claim 25 are dependent on allowable Independent Claims 1 and 20, respectively, which are allowable over the combination of Sirola, Katsura, and Nishikawa. Moreover, Lui does not disclose a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claims 1 and 20. Hence, it is respectfully submitted that Independent Claims 1 and 20 are patentable over the combination of Sirola, Katsura, Nishikawa, and Lui for the reasons discussed above. Since Dependent Claims 7 and 25 depend from Independent Claims 1 and 20 respectively, it is respectfully submitted that Dependent Claims 7 and 25 are patentable over the combination of Sirola, Katsura, Nishikawa, and Lui for the reasons discussed above.

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., U.S. Patent No. 5,634,080 (hereafter Kikinis), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa), and in view of Lui et al., U.S. Patent No. 6,210,771 (hereafter Lui). This rejection is respectfully traversed.

Dependent Claim 17 is dependent on allowable Independent Claims 10, which is allowable over the combination of Kikinis, Katsura, and Nishikawa. Moreover, Lui does not disclose a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claim 10. Hence, it is respectfully submitted that Independent Claim 10 is patentable over the combination of Kikinis, Katsura, Nishikawa, and Lui for the reasons discussed above. Since Dependent Claim 17 depends from Independent Claim 10, it is respectfully submitted that Dependent Claim 17 is patentable over the combination of Kikinis, Katsura, Nishikawa, and Lui for the reasons discussed above.

Claims 6 and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al., U.S. Patent No. 6,415,138 (hereafter Sirola), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa), and in view of Sandbach et al., U.S. Patent No. 6,333,736 (hereafter Sandbach). These rejections are respectfully traversed.

Dependent Claim 6 and Dependent Claim 24 are dependent on allowable Independent Claims 1 and 20, respectively, which are allowable over the combination of Sirola, Katsura, and Nishikawa. Moreover, Sandbach does not disclose a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claims 1 and 20. Hence, it is respectfully submitted that Independent Claims 1 and 20 are patentable over the combination of Sirola, Katsura, Nishikawa, and Sandbach for the reasons discussed above. Since Dependent Claims 6 and 24 depend from Independent Claims 1 and 20 respectively, it is respectfully submitted that Dependent Claims 6 and 24 are patentable over the combination of Sirola, Katsura, Nishikawa, and Sandbach for the reasons discussed above.

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., U.S. Patent No. 5,634,080 (hereafter Kikinis), in view of Katsura, U.S. Patent No. 6,377,324 (hereafter Katsura), in view of Nishikawa et al., U.S. Patent No. 5,907,375 (hereafter Nishikawa), and in view of Sandbach et al., U.S. Patent No. 6,333,736 (hereafter Sandbach). This rejection is respectfully traversed.

Dependent Claim 16 is dependent on allowable Independent Claims 10, which is allowable over the combination of Kikinis, Katsura, and Nishikawa. Moreover, Sandbach does not disclose a flexible touch sensor disposed immediately under a bottom of the flexible display panel and is separate from the flexible display panel, as in the invention of Independent Claim 10. Hence, it is respectfully submitted that Independent Claim 10 is patentable over the

combination of Kikinis, Katsura, Nishikawa, and Sandbach for the reasons discussed above. Since Dependent Claim 16 depends from Independent Claim 10, it is respectfully submitted that Dependent Claim 16 is patentable over the combination of Kikinis, Katsura, Nishikawa, and Sandbach for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, remarks, and arguments overcome all rejections. All remaining claims (Claims 1-2, 6-12, 16-21, and 24-25) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-2, 6-12, 16-21, and 24-25) are in condition for allowance.

The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,

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